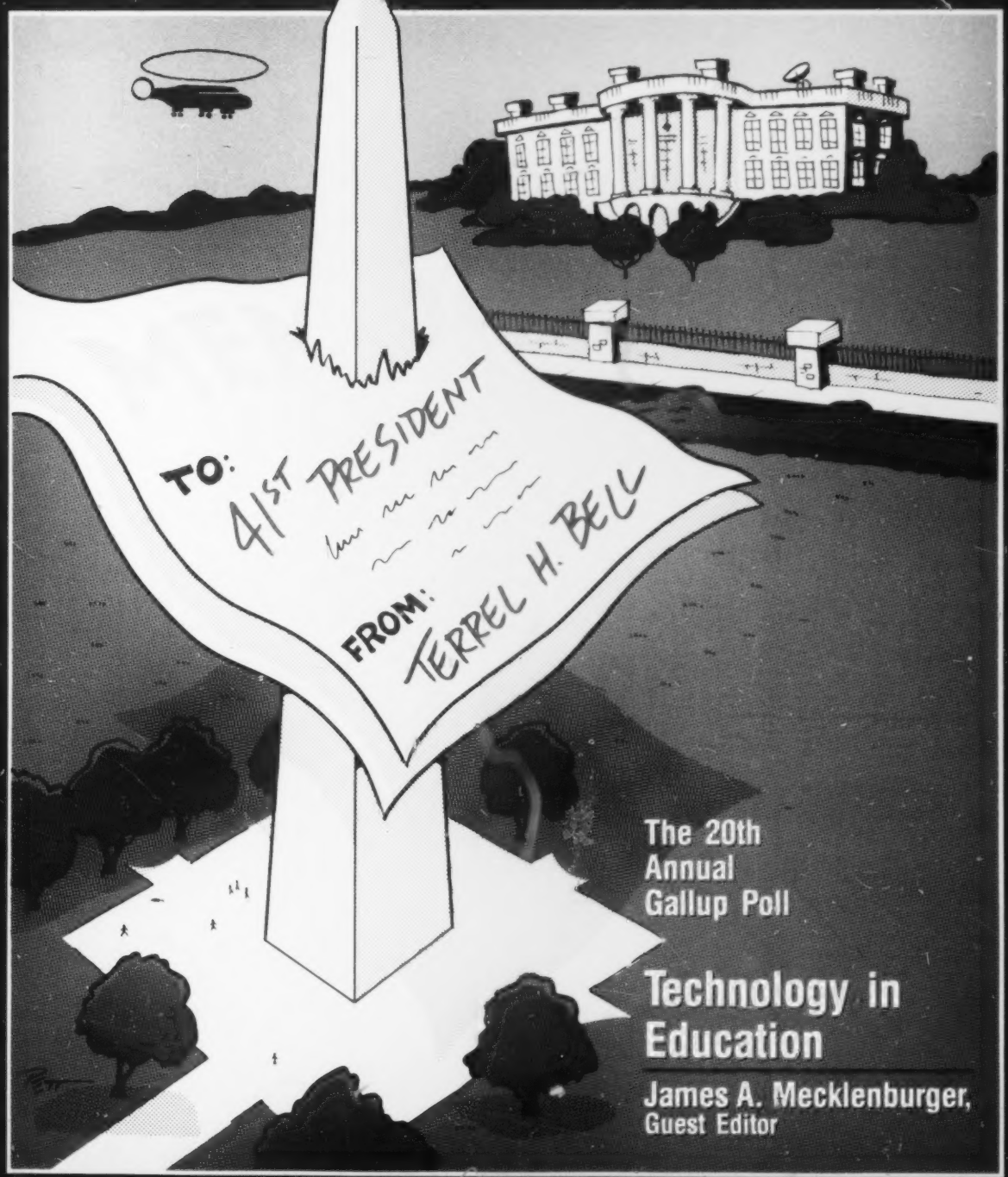
430.70-1 Kappa v. 4

KAPPAN



The 20th Annual Gallup Poll

Technology in Education

James A. Mecklenburger, Guest Editor

A Letter to the Editor

WHEN I WAS 21, I heard seven words that marked my life. A fellow student in a journalism class confidently remarked: "Only crackpots write letters to the editor."

In the years that followed, neither roving packs of rabid dogs nor acid rain on my roses would have elicited a letter to the editor from me. I was no crackpot.

Until now. This fall I'm moved to take pen in hand – and never mind the consequences. Here goes:

Dear Education Editor,

This year, right on cue, the *Kappan* staff has sent you another press release on the annual Gallup Poll of the Public's Attitudes Toward the Public Schools. In that press release, we've emphasized the fact that 40% of the national sample – and 51% of public school parents, the respondents who are presumably the best-informed – give the performance of the public schools *in their own communities* a grade of A or B. Moreover, 70% of the parents of public school children give the school *their oldest child attends* a grade of A or B (while only 5% give the school their oldest child attends a grade of D or F).

These statistics are telling. However, we know from experience that most of you education editors will opt for headlines that say, "64% of Americans Give U.S. Schools [in the nation as a whole] a Grade of C or Lower." Bad news sells magazines and newspapers.

Give us a break. I know more about the public schools than most Gallup Poll respondents. But what I *really* know about the schools in, say, Cleveland or Walla Walla or Trenton or Peoria – the schools in the nation as a whole – I've largely learned from you, the national media. Indeed, a majority (52%) of the respondents to the 1988 Gallup Poll say that they obtain their information about the schools from newspapers, and 32% say that their information comes from radio and/or television.

In other words, the American public relies on the mass media to interpret the performance of one of its most important institutions. That's a heavy responsibility, and I think that you're taking it too lightly.

When you note that the most important problem facing the schools is drug use (according to the last three Gallup/Phi Delta Kappa polls), do you remember to point out that the schools don't generate this problem and that they cannot solve it singlehandedly? Drugs are not a school problem; they are a *societal* problem.

Do you ever remind your readers that students and their parents bear a sizable share of the responsibility for students' achievement (a fact that Terrel Bell and Susan Ohanian emphasize in the September *Kappan*)?

Do you ever look at working conditions in the schools in your community? Do you interview students or parents? Have you ever thought of shadowing a teacher or an administrator for seven consecutive 16-hour days, just to find out what those jobs are all about? (The work of educators doesn't necessarily end at 3 p.m. on Fridays.)

Do you cover the learning festivals, the international bazaars, the science fairs, and the other special programs to which administrators and teachers invite you?

In other words, do you try your best to tell the *whole* story of U.S. education?

Most educators readily agree that U.S. schools are not perfect. But we're trying. We're educating a larger proportion of the population than ever before. We're teaching (in regular classrooms) the learning disabled, the blind, the hearing impaired, the emotionally disturbed, the physically disabled – students who were not served in that setting before. At the same time, we're serving children from broken homes, children whose parents are poor, children whose first language is not English, children addicted to mind-altering drugs, children who are already parents themselves, children who see no reason to learn. I'm not making excuses – only introducing you to a few of the daily realities of public schools.

Just as helping every child to learn is our goal, objectivity and fair play should be yours. When you focus only on the bad news, be certain that you recognize the consequences. Gratuitous school bashing demoralizes teachers, administrators, and teacher educators – and thus poorly serves this nation and its young.

Sincerely yours,
PBG

KAPPAN STAFF

PAULINE B. GOUGH, Editor
BRUCE M. SMITH, Managing Editor
MICHAEL GINSBERG, Assistant Editor
KRISTIN HERZOG, Design/Production Director, Advertising/Circulation Manager
STANLEY M. ELAM, Contributing Editor
MARY P. MILLER, Designer
TERRI HAMPTON, Permissions
SHEILA WAY and DEBBIE WEBB, Compositors

PHI DELTA
KAPPAN
USPS 429-840

(ISSN 0031-7217) Published monthly, except July and August, by Phi Delta Kappa, Inc., Eighth & Union, P.O. Box 789, Bloomington, IN 47402. Subscription rate, $20 per year; domestic, $22.50 per year, foreign. Library and institution rate, $25 per year. Single copies $2.50 each; remit with order. Indexed in *Education Index* and in *Current Index to Journals in Education*; available on microfilm, University Microfilms, Inc., Ann Arbor, Mich. Member, Educational Press Association of America. Second-class postage paid at Bloomington, Ind., and at additional mailing offices. *Postmaster:* Send address changes to *Phi Delta Kappan*, P.O. Box 789, Bloomington, IN 47402.

Copyright 1988 by Phi Delta Kappa, Inc.

HEADQUARTERS STAFF

LOWELL C. ROSE, Executive Director; DON L. PARK, Associate Executive Director/Program; LARRY W. BARBER, Director, Center on Evaluation, Development, and Research (CEDR); DEREK L. BURLESON, Editor of Special Publications; HOWARD D. HILL, Director of Chapter Programs; ROBERT E. McDANIEL, Director of Administrative Services; NEVILLE L. ROBERTSON, Director, Center for Dissemination of Innovative Programs; JACK FRYMIER, Senior Fellow; WILMER K. BUGHER, Director of Special Projects; VLADIMIR BEKTESH, Media Specialist; SHARI BRADLEY, Marketing and Training Coordinator; WILLARD DUCKETT, Assistant Director, CEDR; PHILLIP HARRIS, Director, Professional Development; MARY C. McCLELLAN, Research Assistant, CEDR; DUANE B. RICHARDS, Professional Development Specialist; DAVID M. RUETSCHLIN, Staff Associate, Special Publications; DEBORAH BURNETT STROTHER, CEDR Editor; SANDRA WEITH, Administrative Assistant, Administration; TERRY L. WIEDMER, Assistant for Membership/Public Information.

BOARD OF DIRECTORS

JOHN V. ROWLEY, President; Principal, Mt. Pleasant Middle School, Livingston, NJ 07039.
CAROL O'CONNELL, President Elect; Director, Elementary Educ., Northmont City Schools, Englewood, OH 45322.
RON JOEKEL, Past President; Assoc. Dean, Teachers College, Univ. of Nebraska, Lincoln, NE 68508.
ROGER W. ANDERSON, Vice President; Assoc. Dean and Registrar, Luther College, Decorah, IA 52101.
BEVERLY HADDOCK, Vice President; Music Coordinator, Bellingham Public Schools, Bellingham, WA 98225.
JACK KOSOY, Vice President; Admin., Adult Educ., L.A. Unified School Dist., 16539 Bircher St., Granada Hills, CA 91344.
DONALD H. DUNCAN, Director, Dist. I; Professor of Special Educ., Western Oregon State College, Monmouth, OR 97361.
ROBERT L. MAULLER, Director, Dist. II; L.A. Unified School Dist. Admin., Ret., 550 Allendale Rd., Pasadena, CA 91106.
SHIRLEY N. ROBARDS, Director, Dist. III; Director of Student Teaching, Univ. of Tulsa, Tulsa, OK 74104.
QUINN BRUNSON, Director, Dist. IV; Educational Consultant, 1227 36th Ave., Rock Island, IL 61201.
DOUGLAS BEDIENT, Director, Dist. V; Director, Learning Resources Service, Southern Illinois University at Carbondale, Carbondale, IL 62901.
JAMES V. FOGARTY, JR., Director, Dist. VI; Director, Special Educ., BOCES 2, Suffolk County, NY 11720.
JAMES M. SCHNEIDER, Director, Dist. VII; Professor and Administrative Dean, Brevard Community College, Cocoa, FL 32922.
GEORGE KERSEY, JR., Director, Dist. VIII; Principal, Carter-Lawrence Middle School, Nashville, TN 37203.

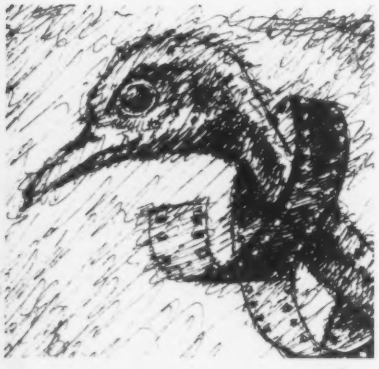
EDITORIAL CONSULTANTS

JOMILLS H. BRADDOCK II, Principal Research Scientist, Center for Social Organization of Schools, Johns Hopkins University, Baltimore.
DAVID L. CLARK, Professor of Education, University of Virginia, Charlottesville.
ALONZO CRIM, Professor of Educational Administration, Georgia State University, Atlanta.
DENIS DOYLE, Senior Research Fellow, Hudson Institute, Alexandria, Va.
MARTIN HABERMAN, Professor, University of Wisconsin, Milwaukee.
ANN LIEBERMAN, Professor, University of Washington, Seattle.
MILBREY McLAUGHLIN, Professor of Education, Stanford University, Stanford, Calif.
JOSEPH H. NATHAN, Coordinator, Spring Hill Regional Issues Forum, St. Paul, Minn.
ARTHUR G. POWELL, Director, Commission on Educational Issues, National Association of Independent Schools, Boston, Mass.
CAROLYN WARNER, Former Superintendent, Arizona Department of Education, Phoenix.
RON JOEKEL, Past President, PDK.

Reprints of articles appearing in the *Kappan* may be obtained from the business office: 1-2 pp., $8; 3-4 pp., $13; 5-6 pp., $19; and 7-8 pp., $25 for 100 copies. On larger orders, write for price schedule. Please remit with order.

The *Phi Delta Kappan* publishes articles concerned with educational research, service, and leadership; issues, trends, and policy are emphasized. Views expressed do not necessarily agree with positions taken by Phi Delta Kappa, the professional fraternity in education.

Address all purchase orders and address changes to Director of Administrative Services. Allow six weeks for processing address changes. Address all editorial correspondence to *Phi Delta Kappan*, P.O. Box 789, Bloomington, IN 47402. Ph. 812/339-1156. Please include postpaid, self-addressed envelope.



Phi Delta September 1988 • Volume 70 • Number 1

KAPPAN

FEATURES

8 **On the Need for National Leadership to Make American Education Work,** *by Terrel H. Bell*

11 **A Not-So-Tearful Farewell to William Bennett,** *by Susan Ohanian*

18 **What the Ostrich Sees: Technology and the Mission of American Education,** *by James A. Mecklenburger*

20 **Restructuring the System Is the Solution,** *by Lewis J. Perelman*

25 **Utah: A Case Study,** *by James R. Moss*

26 **Bringing the 1990s to the Classroom of Today,** *by Fred D'Ignazio*

28 **We Have Met the System – and It Is Us!,** *by Lewis A. Rhodes*

31 **Giving Teachers Their Due,** *by David Grady*

32 **The System Is the Solution?,** *by Sylvia Charp*

33 **The 20th Annual Gallup Poll of the Public's Attitudes Toward the Public Schools,** *by Alec M. Gallup and Stanley M. Elam*

47 **Forward to the Trivia of 1890: The Impending Social Studies Program?,** *by Richard E. Gross*

50 **Models of Wisdom in the Teaching of History,** *by Samuel S. Wineburg and Suzanne M. Wilson*

59 **Aims, Equity, and Access in Computer Education,** *by Archie E. Lapointe and Michael E. Martinez*

62 **Working in Mysterious Ways: The Federal Government and Education,** *by John F. Jennings*

66 **The New Age of Schoolbook Protest,** *by Edward B. Jenkinson*

DEPARTMENTS

2 **THE EDITOR'S PAGE,** A Letter to the Editor

4 **WASHINGTON REPORT,** *by Anne C. Lewis*

6 **STATELINE,** *by Chris Pipho*

70 **RESEARCH,** *by Gerald W. Bracey*

74 **DE JURE,** Cannons and Canons: Enough Is Enough, *by Perry A. Zirkel*

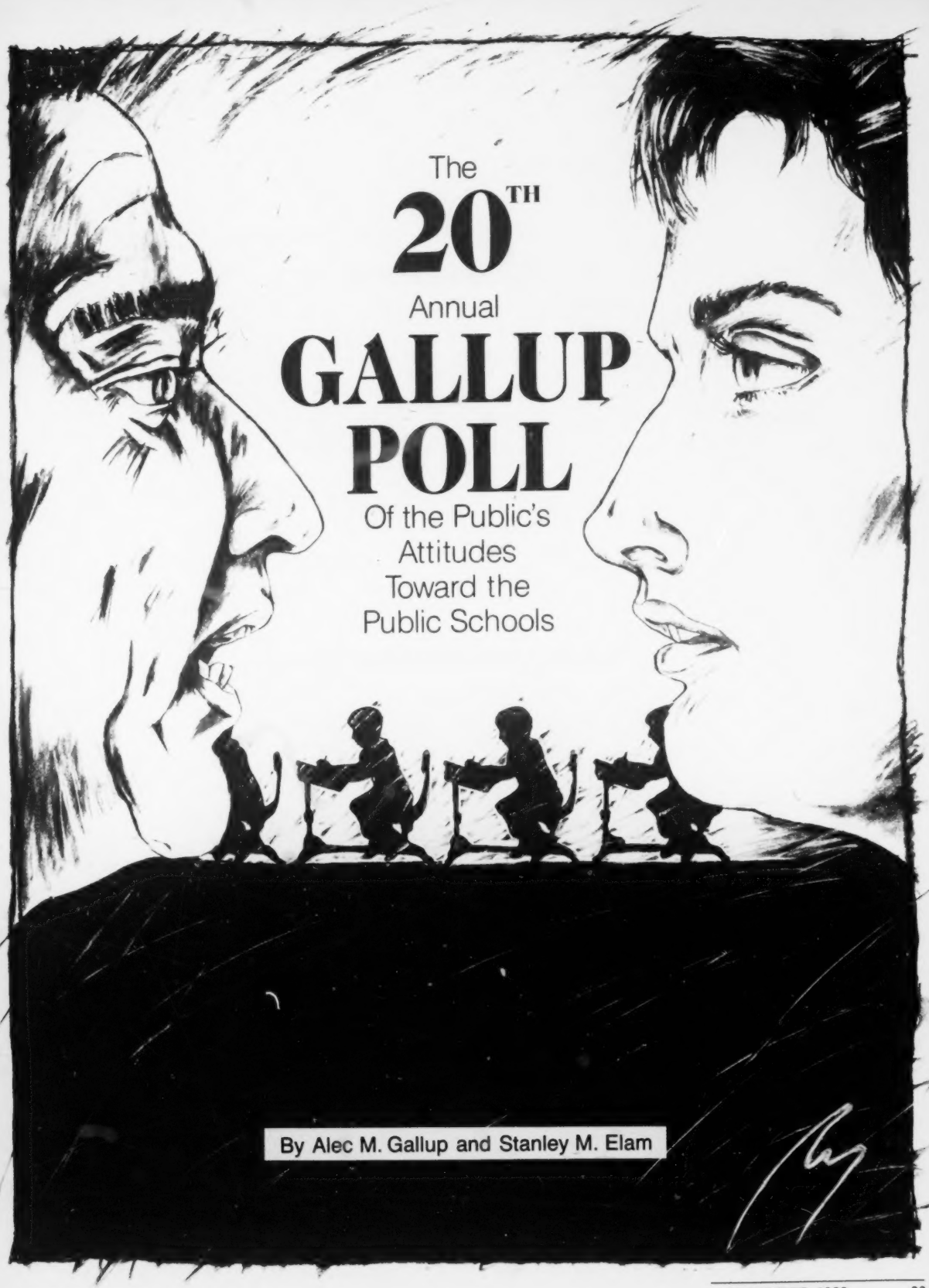
76 **IN EUROPE,** Going into Orbit, *by Michael G. Bruce*

78 **PROTOTYPES,** How to Start a Computer Literacy Program in an Elementary School, *by Barry Ekman*

79 **BOOKS,** *Laurence D. Brown*

84 **BACKTALK**

Cover Illustration: Joel Pett



The 20TH Annual GALLUP POLL

Of the Public's Attitudes Toward the Public Schools

By Alec M. Gallup and Stanley M. Elam

Illustration by Guy Lawrence

Most Important Problems Facing Local Public Schools in 1988

The public has become acutely aware of drug abuse as a problem for U.S. public schools in the past two years. When asked to identify the biggest problems with which the local public schools must deal, 32% of those interviewed for the 1988 Gallup education poll said "use of drugs by students." Lack of discipline was a distant second, mentioned by 19% of the respondents.

This is the third consecutive year in which the public has identified drug abuse as the biggest local school problem. However, in 1986 only two percentage points separated the problem of drug abuse from the problem of discipline. In 1987 drug abuse was mentioned by 30% of the respondents, discipline by 22%. In the 17 Gallup education polls prior to 1986, the public identified discipline as the biggest problem for the local schools in each year except 1971, when "lack of proper financing" was first.

Ironically, overall drug use among young people continued a gradual decline last year, according to the University of Michigan's Institute for Social Research, but the U.S. still has the highest rate of drug use among young people of the world's industrialized nations. More than half (57%) of last year's high school seniors had tried an illicit drug, and more than a third had tried illicit drugs other than marijuana. The use of alcohol remained fairly steady last year, and cigarette smoking — which the researchers say will take the lives of more young people than all other drugs combined — has not dropped among high school seniors since 1984.*

The question:

What do you think are the biggest problems with which the public schools in this community must deal?

*For details of the University of Michigan's annual drug survey, contact Gil Goodwin, News and Information Service, University of Michigan, 412 Maynard, Ann Arbor, MI 48109-1399. Ph. 313/747-1844.

ALEC M. GALLUP is co-chairman, with George Gallup, Jr., of the Gallup Organization, Princeton, N.J. STANLEY M. ELAM (Indiana University Chapter) is contributing editor of the Phi Delta Kappan. *He was* Kappan *editor from 1956 through 1980 and has been coordinating Phi Delta Kappa's polling program since his retirement.*

	National Totals %	No Children In School %	Public School Parents %	Nonpublic School Parents %
Use of drugs	32	34	30	29
Lack of discipline	19	20	15	25
Lack of proper financial support	12	10	17	11
Difficulty getting good teachers	11	10	11	13
Poor curriculum/poor standards	11	11	11	14
Parents' lack of interest	7	7	7	8
Moral standards	6	6	7	2
Large schools/ overcrowding	6	4	10	9
Pupils' lack of interest/ truancy	5	6	4	5
Drinking/alcoholism	5	5	6	6
Low teacher pay	4	3	7	5
Integration/busing	4	4	3	3
Teachers' lack of interest	3	3	3	8
Crime/vandalism	3	3	2	1
Lack of needed teachers	2	1	3	2
Lack of respect for teachers/other students	2	2	1	2
Fighting	1	2	1	1
Lack of proper facilities	1	1	3	3
Mismanagement of funds/programs	1	1	1	1
Problems with administration	1	1	1	1
Communication problems	1	1	1	*
Parents' involvement in school activities	1	1	1	*
Lack of after-school programs	1	*	1	1
Too many schools/ declining enrollment	1	*	1	*
School board politics	1	1	1	1
There are no problems	2	2	4	3
Miscellaneous	5	4	6	4
Don't know	10	12	4	5

*Less than one-half of 1%.
(Figures add to more than 100% because of multiple answers.)

Public Confidence in the Schools' Ability to Deal with Societal Problems

In order to measure levels of public confidence in the ability of the public schools to deal with four particularly troublesome societal problems, four questions were asked. In each case, the choices given were: a great deal of confidence, a fair amount, not very much, or none at all.

Among respondent groups, public school parents generally show the most confidence in the public schools' ability to deal with these societal problems, particularly drug and alcohol abuse. None of the groups seem to have much confidence in the schools' ability to handle the problem of teenage pregnancy.

Further demographic breakdowns reveal few significant differences. However, people living in communities with populations of less than 50,000 seem to have more confidence in their schools' ability to deal with these problems than do people living in large cities. In addition, people with higher levels of education appear to be *less confident* of their schools' ability to solve these problems than people with only a grade school or high school education.

The first question:

Illustrations by Guy Lawrence

How much confidence do you have in your local public schools to deal with drug abuse?

	National Totals %	No Children In School %	Public School Parents %	Nonpublic School Parents %
A great deal	9	9	12	5
A fair amount	37	35	44	30
Not very much	35	35	31	43
None at all	12	12	12	19
Don't know	7	9	1	3

The second question:

How much confidence do you have in your local public schools to deal with alcohol abuse?

	National Totals %	No Children In School %	Public School Parents %	Nonpublic School Parents %
A great deal	10	9	15	8
A fair amount	33	34	34	25
Not very much	34	33	32	45
None at all	13	12	14	16
Don't know	10	12	5	6

The third question:

How much confidence do you have in your local public schools to deal with teenage pregnancy?

	National Totals %	No Children In School %	Public School Parents %	Nonpublic School Parents %
A great deal	5	5	6	4
A fair amount	30	29	33	24
Not very much	36	36	37	39
None at all	17	17	16	25
Don't know	12	13	8	8

The fourth question:

How much confidence do you have in your local public schools to deal with AIDS education?

	National Totals %	No Children In School %	Public School Parents %	Nonpublic School Parents %
A great deal	10	11	10	9
A fair amount	30	30	32	31
Not very much	27	26	28	29
None at all	14	12	17	17
Don't know	19	21	13	14

Combating the AIDS Epidemic

Because medical authorities generally believe that education offers the best hope of controlling the AIDS epidemic in America, this year's Gallup survey attempted to elicit the public's perception of the education-related issues raised by AIDS.

The public was virtually unanimous in its support for developing AIDS education programs in the public schools. Ninety percent of the respondents thought that such programs should be developed, and only 5% thought that they should not.

Asked at what age children should begin participating in an AIDS education program, those who support such a program generally thought that it should start before the age of puberty. Forty percent of the national sample would start it when children are between 5 and 9 years of age; another 40% would begin at age 10 to 12; only 11% would wait until children are 13 or older.

There was overwhelming support for teaching what is called "safe sex" as a means of preventing AIDS. (Presumably, most respondents understood this to be teaching the use of condoms.) Seventy-eight percent of the respondents approve teaching "safe sex," while only 16% oppose it.

Finally, respondents were asked whether they favor or oppose allowing children who suffer from AIDS to attend local public schools. Although the courts, with the backing of medical opinion, seem to have settled this question in favor of allowing AIDS victims to attend school, the public still has misgivings. Although 57% favor allowing attendance, 24% oppose it, and 19% do not take a position.

The first question:

Do you believe that the local public schools should or should not develop an AIDS education program?

	National Totals %	No Children In School %	Public School Parents %	Nonpublic School Parents %
Should	90	88	94	95
Should not	5	6	4	4
Don't know	5	6	2	1

The second question (asked of those who favor having the local public schools develop an AIDS education program):

At what age should students begin participating in an AIDS education program?

	National Totals %	No Children In School %	Public School Parents %	Nonpublic School Parents %
Under 5 years	6	6	5	11
5-9 years	40	39	43	42
10-12 years	40	40	39	32
13-15 years	10	11	11	13
16 years or older	1	*	1	1
Don't know	3	4	1	1

*Less than one-half of 1%.

The third question:

Should the local public schools teach what is called "safe sex" for AIDS prevention, or should they not?

	National Totals %	No Children In School %	Public School Parents %	Nonpublic School Parents %
Should	78	77	81	82
Should not	16	16	16	15
Don't know	6	7	3	3

The fourth question:

Do you favor or oppose allowing children who suffer from AIDS to attend local public schools?

	National Totals %	No Children In School %	Public School Parents %	Nonpublic School Parents %
Favor	57	57	57	57
Oppose	24	23	28	28
Don't know	19	20	15	15

Grading the Public Schools

The ratings people give their local schools have fluctuated very little over the past four years. Since the all-time low in 1983, when C, D, and F ratings overwhelmed A and B ratings (by 52% to 31%), people seem to have regained a measure of confidence in their schools. A and B ratings have leveled off at 40% or above, while C, D, and F ratings hover around 45%.

One disturbing element in the ratings is the fact that people living in communities of 50,000 or more residents tend to give their public schools very low ratings. For example, in this year's survey only about 7% of large-city dwellers gave their public schools an A, whereas 12% of those living in smaller communities did so.

Once again, respondents have much more confidence in their local schools than in the public schools of the nation as a whole. Parents of students in the public schools, who should know more about the schools than other respondents, tend to be pleased with the quality of the local schools.

The first question:

Students are often given the grades A, B, C, D, and FAIL to denote the quality of their work. Suppose the *public* schools themselves, in this community, were graded in the same way. What grade would you give the public schools here — A, B, C, D, or FAIL?

	National Totals %	No Children In School %	Public School Parents %	Nonpublic School Parents %
A+B	40	37	51	33
A	9	8	13	8
B	31	29	38	25
C	34	34	36	37
D	10	10	8	21
FAIL	4	4	4	4
Don't know	12	15	1	5

Ratings Given the Local Public Schools

	1988 %	1987 %	1986 %	1985 %	1984 %	1983 %	1982 %	1981 %	1980 %	1979 %	1978 %
A+B	40	43	41	43	42	31	37	36	35	34	36
A	9	12	11	9	10	6	8	9	10	8	9
B	31	31	30	34	32	25	29	27	25	26	27
C	34	30	28	30	35	32	33	34	29	30	30
D	10	9	11	10	11	13	14	13	12	11	11
FAIL	4	4	5	4	4	7	5	7	6	7	8
Don't know	12	14	15	13	8	17	11	10	18	18	15

The second question:

How about the public schools in the nation as a whole? What grade would you give the public schools nationally — A, B, C, D, or FAIL?

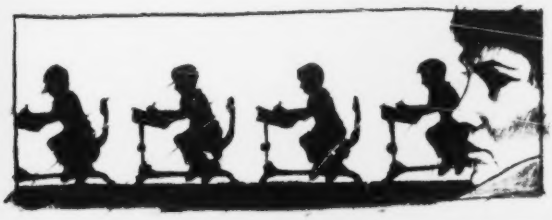
	National Totals %	No Children In School %	Public School Parents %	Nonpublic School Parents %
A+B	23	21	25	18
A	3	2	3	2
B	20	19	22	16
C	48	46	52	57
D	13	13	12	16
FAIL	3	4	2	2
Don't know	13	16	9	7

Once again, this 20th Gallup survey shows that, in general, parents of public school children have a higher opinion of the specific schools their children attend than of "local" or "national" public schools in general.

The third question:

Using the A, B, C, D, FAIL scale again, what grade would you give the school your oldest child attends?

	Public School Parents			
	1988 %	1987 %	1986 %	1985 %
A+B	70	69	65	71
A	22	28	28	23
B	48	41	37	48
C	22	20	26	19
D	3	5	4	5
FAIL	2	2	2	2
Don't know	3	4	3	3



School Programs for Latch-Key Children

Three questions in this year's survey addressed the growing problem of "latch-key children" — those whose parents do not return home until late in the day. The public overwhelmingly approved (70% in favor, 23% opposed) public school programs that would provide before- and after-school care for these children. (The question did not ask whether instruction should be provided.) Of those who favor such programs, 49% believe that parents should pay for them, while 34% think that tax money should be used. The respondents were equally divided (46% for, 45% against) regarding daylong summer programs in the public schools for latch-key children.

The demographic breakdowns show some interesting, though small, differences among groups on the idea of school programs for latch-key children. These differences suggest that policy makers considering programs for latch-key children would do well to sample opinion in their own communities. More women than men favor the idea (73% to 66%), more nonwhites than whites favor the idea (73% to 69%), and more younger people (ages 18-29, 78%; ages 30-49, 76%) than older people (age 50 and over, 58%) favor the idea. Household income also seems to be related to opinion on the question; affluent respondents favor these programs somewhat more than do lower-income respondents.

The first question:

Would you favor or oppose the local public schools' offering before-school and after-school programs where needed for so-called latch-key children, that is, those whose parents do not return home until late in the day?

	National Totals %	No Children In School %	Public School Parents %	Nonpublic School Parents %
Favor	70	67	77	76
Oppose	23	25	19	19
Don't know	7	8	4	5

Further breakdowns:

	Favor %	Oppose %	Don't Know %
NATIONAL TOTALS	70	23	7
Sex			
Men	66	27	7
Women	73	20	7
Race			
White	69	25	6
Nonwhite	73	13	14
Age			
18-29 years	78	15	7
30-49 years	76	20	4
50 and over	58	32	10
Community Size			
1 million and over	77	16	7
500,000-999,999	74	16	10
50,000-499,999	72	23	5
2,500-49,999	65	30	5
Under 2,500	60	32	8
Education			
College	76	20	4
Graduate	76	22	2
Incomplete	76	18	6
High school	67	24	9
Graduate	70	23	7
Incomplete	62	24	14
Grade school	53	37	10
Region			
East	72	20	8
Midwest	71	24	5
South	65	26	9
West	74	22	4
Income			
$40,000 and over	76	21	3
$30,000-$39,999	76	20	4
$20,000-$29,999	72	22	6
$10,000-$19,999	64	27	9
Under $10,000	64	24	12

The second question (asked of those who favor school programs for latch-key children):

Do you think school-operated programs for latch-key children should be paid for by parents or with school taxes?

	National Totals %	No Children In School %	Public School Parents %	Nonpublic School Parents %
Parents	49	48	51	50
School taxes	34	33	35	35
Other (volunteered)	6	7	5	4
Neither (volunteered)	1	1	1	1
Don't know	10	11	8	10

The third question:

Do you think the local schools should conduct daylong programs for latch-key children in the summer, or should they not?

	National Totals %	No Children In School %	Public School Parents %	Nonpublic School Parents %
Should	46	46	44	53
Should not	45	44	51	44
Don't know	9	10	5	3

Higher Taxes for School Improvement

This year's Gallup survey reveals a statistically significant increase in public willingness to pay more taxes to help raise the standards of education in the U.S. since the same question was first asked in 1983. Today, 64% of respondents say they are willing to pay more taxes for this purpose; 29% are opposed. Comparable figures for 1983 were 58% in favor and 33% opposed. This willingness to pay for better education characterizes every demographic and regional group of respondents. It is interesting to note that the group that most strongly favors raising taxes in order to raise educational standards (75% in favor) is the group with household incomes of $40,000 or more.

The question:

Would you be willing to pay more taxes to help raise the standards of education in the United States?

	National Totals %	No Children In School %	Public School Parents %	Nonpublic School Parents %
Yes	64	61	73	68
No	29	31	23	30
Don't know	7	8	4	2

	National Totals	
	1988 %	1983 %
Yes	64	58
No	29	33
Don't know	7	9

Spending More for the Slow and the Gifted

Since 1982 poll respondents have been asked three times how they feel about special programs for two groups of students: children with learning problems and children who are especially gifted or talented. No particular trends in public opinion are apparent across the three polls.

As a nation, we are still divided on the question of spending more money to help children with learning problems: 48% would spend more on children with learning problems than we spend on average children; 45% would spend the same amount. There is considerable opposition to spending more for the education of the gifted and talented than we spend for the education of average children: only 25% would spend more for gifted children than for average children, while 63% would spend about the same amount, and 7% would spend less. Public school parents, nonpublic school parents, and people with no children in the schools tend to agree on this point.

The first question:

How do you feel about the spending of public school funds for special instruction and homework programs for students with *learning problems*? Do you feel that more public school funds should be spent on students with learning problems than on average students — or about the same amount?

	National Totals %	No Children In School %	Public School Parents %	Nonpublic School Parents %
Spend more	48	48	48	44
Spend same amount	45	44	47	46
Spend less	2	3	2	6
Don't know	5	5	3	4

	National Totals		
	1988 %	1985 %	1982 %
Spend more	48	51	42
Spend same amount	45	40	48
Spend less	2	2	4
Don't know	5	7	6

The second question:

How do you feel about the spending of public school funds for special instruction and homework programs for *gifted and talented students*? Do you feel that more public school funds should be spent on gifted and talented students than on average students — or about the same amount?

	National Totals %	No Children In School %	Public School Parents %	Nonpublic School Parents %
Spend more	25	24	27	24
Spend same amount	63	63	65	66
Spend less	7	7	6	6
Don't know	5	6	2	4

	National Totals		
	1988 %	1985 %	1982 %
Spend more	25	30	19
Spend same amount	63	58	64
Spend less	7	5	11
Don't know	5	7	6

Attitudes Toward Racial Integration

Three questions on racial integration of the public schools (two asked in 1971, the other in 1973) were repeated for the first time in this 20th poll. The responses show that public attitudes today are significantly more liberal.

Today, a majority of the respondents (55%) feel that school integration has improved the quality of education for black students. In 1971 only 43% thought so. There also appears to be a move toward the belief that racial integration has helped the quality of education received by white students. Only 23% believed this in 1971; today, 35% say that they do.

Thirty-four years after the U.S. Supreme Court outlawed segregation, racial integration of the schools is still incomplete. Gallup interviewers asked in 1973 whether more or less should be done to integrate the schools. In that year, more people thought less should be done (38%) than thought more should be done (30%). Today the reverse is true. Thirty-seven percent of people say more should be done; 23% say less. (Thirty-one percent like the status quo.)

Demographic breakdowns of data from the current poll show that nonwhites are still greatly dissatisfied with the pace of integration. Sixty-one percent of nonwhites say that more should be done; only 10% say less. Comparable figures among whites are 33% and 25%. Nonwhites are also more likely than whites to believe that racial integration has improved the quality of education for both blacks and whites.

The first question:

How do you feel about school integration? Do you feel it has improved the quality of education received by black students?

	National Totals %	No Children In School %	Public School Parents %	Nonpublic School Parents %
Yes	55	55	57	50
No	29	28	31	34
Don't know	16	17	12	16

	National Totals	
	1988 %	1971 %
Yes	55	43
No	29	31
Don't know	16	26

The second question:

How do you feel about school integration? Do you feel it has improved the quality of education received by white students?

	National Totals %	No Children In School %	Public School Parents %	Nonpublic School Parents %
Yes	35	35	37	36
No	47	46	47	48
Don't know	18	19	16	16

	National Totals	
	1988 %	1971 %
Yes	35	23
No	47	51
Don't know	18	26

The third question:

Do you believe that more should be done — or that less should be done — to integrate schools throughout the nation?

	National Totals %	No Children In School %	Public School Parents %	Nonpublic School Parents %
More	37	38	36	30
Less	23	22	24	26
No change	31	30	34	33
Don't know	9	10	6	11

	National Totals	
	1988 %	1973 %
More	37	30
Less	23	38
No change	31	23
Don't know	9	9

Bilingual Instruction

Political support for bilingual education in the U.S. has been on the decline, and public support is uncertain. This year's survey asked whether people favor or oppose instruction in a student's native language in the public schools.

The question:

Would you favor or oppose the local public schools' providing instruction in a student's native language, whatever it is, in order to help him or her become a more successful learner?

	National Totals %	No Children In School %	Public School Parents %	Nonpublic School Parents %
Favor	42	41	45	42
Oppose	49	49	48	48
Don't know	9	10	7	10

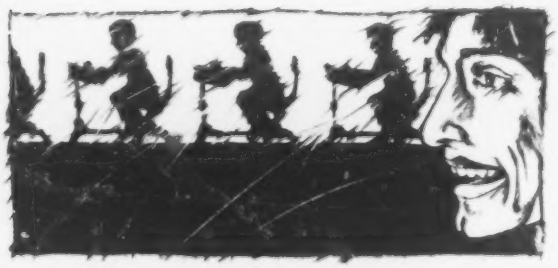
Rewarding Schools for Improving Achievement of Minorities

A majority of the public favors rewarding schools financially if they demonstrate that they can improve the academic achievement of minority students. Support for this idea is particularly high among nonwhites (72%) and among residents of the largest cities (61%).

The question:

Do you favor or oppose encouraging legislatures, school boards, and other governing bodies to provide special financial rewards to schools that demonstrate that they can increase academic achievement among minorities as measured by standardized tests?

	National Totals %	No Children In School %	Public School Parents %	Nonpublic School Parents %
Favor	53	52	54	59
Oppose	34	34	37	30
Don't know	13	14	9	11



Year-Round School

A shortage of schoolrooms is beginning to reappear in some sections of the country, as children of baby-boomers of the Fifties swell enrollments. In response, the notion of keeping schools open all year in order to make the best use of existing facilities has been revived from the early Seventies — with similar results. More Americans disapprove than approve of the idea of year-round schools, as was also the case in 1970.

The question:

To utilize school buildings to the full extent, would you favor keeping the schools open year around? Parents could choose which three of the four quarters of the year their children could attend. Do you approve or disapprove of this idea?

	National Totals %	No Children In School %	Public School Parents %	Nonpublic School Parents %
Approve	40	40	40	40
Disapprove	53	52	55	53
Don't know	7	8	5	7

	National Totals 1988 %	1972 %	1970 %
Approve	40	53	42
Disapprove	53	41	49
Don't know	7	6	9

Public Support for Reduced Class Size

The general public is convinced, as educational researchers are not, that reducing class size from as many as 35 to 20 would greatly improve student achievement. (Some of the best research shows that only a reduction *below* 20 students per class would, in most cases, make a significant difference.*)

The question:

In some school districts, the typical class has as many as 35 students; in other districts, only 20. In regard to the achievement or progress of students, do you think small classes make a great deal of difference, little difference, or no difference at all?

	National Totals %	No Children In School %	Public School Parents %	Nonpublic School Parents %
Great deal of difference	71	68	77	83
Little difference	21	22	17	11
No difference	6	7	5	5
Don't know	2	3	1	1

National Exam for High School Graduation

Most respondents to the 1988 poll are convinced that U.S. high school students should be required to pass a standard nationwide examination in order to receive a high school diploma. When the question was first asked by the Gallup Organization in 1958, 50% held this belief, and 39% disagreed. Today 73% approve of such an exam, and only 22% disapprove.

The question:

Should all high school students in the U.S. be required to pass a standard nationwide examination in order to get a high school diploma?

*See Gene V Glass, "On Criticism of Our Class Size/Student Achievement Research: No Points Conceded," *Phi Delta Kappan*, December 1980, pp. 242-44.

	National Totals %	No Children In School %	Public School Parents %	Nonpublic School Parents %
Yes	73	73	73	78
No	22	22	24	21
Don't know	5	5	3	1

	National Totals				
	1988 %	1984 %	1981 %	1976 %	1958 %
Yes	73	65	69	65	50
No	22	29	26	31	39
Don't know	5	6	5	4	11

National Tests for Comparing Schools

Ever since 1970 people have favored national tests to permit comparisons of student achievement in their local schools with achievement in other schools. The sentiment for such tests seems to be a little stronger now than in earlier years.

The question:

Would you like to see students in the local schools given national tests so that their educational achievement could be compared with students in other communities?

	National Totals %	No Children In School %	Public School Parents %	Nonpublic School Parents %
Yes	81	81	82	82
No	14	14	14	16
Don't know	5	5	4	2

	National Totals				
	1988 %	1986 %	1983 %	1971 %	1970 %
Yes	81	77	75	70	75
No	14	16	17	21	16
Don't know	5	7	8	9	9

The Home-School Movement

In recent years the so-called "home-school movement" has received considerable media attention, although the number of students being schooled at home in the U.S. is not significant. A majority of the public believes that people should have the legal right to educate their children at home, but they reject, by about a 2-1 margin, the idea that home-schooling is a good thing for the nation. However, fewer disapprove of home-schooling today than in 1985. People also believe that a home-school should be required to meet the same teacher certification standards as a public school.

The first question:

Recently there has been a movement toward home-schools, that is, situations in which parents keep their children at home to teach the children themselves. In general do you think that this movement is a good thing or a bad thing for the nation?

	National Totals %	No Children In School %	Public School Parents %	Nonpublic School Parents %
Good thing	28	27	29	29
Bad thing	59	59	61	56
Don't know	13	14	10	15

	National Totals	
	1988 %	1985 %
Good thing	28	16
Bad thing	59	73
Don't know	13	11

The second question:

Do you think that parents should or should not have the legal right to educate their children at home?

	National Totals %	No Children In School %	Public School Parents %	Nonpublic School Parents %
Should	53	51	57	56
Should not	39	40	37	38
Don't know	8	9	6	6

The third question:

Do you think that the home-schools should or should not be required to meet the same teacher certification standards as the public schools?

	National Totals %	No Children In School %	Public School Parents %	Nonpublic School Parents %
Should	82	81	84	80
Should not	12	12	12	16
Don't know	6	7	4	4

Discipline Through Physical Punishment

As it has been for generations, corporal punishment in school for disciplinary reasons is a controversial issue in

1988. Only a slight majority of respondents say they approve of physical punishment (50% for, 45% against). Since 1970 the opposition to physical punishment has gained considerable ground. In that year, when the question was first asked in this poll, 62% approved of physical punishment, and 33% disapproved of it.

The question:

Spanking and similar forms of physical punishment are permitted in the lower grades of some schools for children who do not respond well to other forms of discipline. Do you approve or disapprove of this practice?

	National Totals %	No Children In School %	Public School Parents %	Nonpublic School Parents %
Approve	50	51	49	46
Disapprove	45	44	48	50
Don't know	5	5	3	4

Parent Participation In School Affairs

Critics of the schools continually call for more participation by parents. This year, for the first time, the Gallup survey asked public school parents how much effort the schools make to involve them in school affairs. Only 25% of parents believe that the schools put forth a "great deal of effort" to involve parents.

The question:

To what degree do the local public schools attempt to attract participation by parents in school affairs? A great deal, a fair amount, not very much, or none at all?

	Public School Parents %
A great deal	25
A fair amount	49
Not very much	20
None at all	2
Don't know	4

Have the Schools Been Improving?

Two questions asked in the 1988 poll (both also asked in earlier polls) reveal that two-thirds of the respondents believe that the schools are the same or better today than they were five years ago and that almost half of the respondents believe that children now get a better education than they themselves got. The differences are not large, but they nonetheless argue against the presumption that schools were better in the "good old days."

It should be noted, however, that people in communities of more than one million residents generally believe that their schools are worse today than they were five years ago. This is not true of any other demographic group.

The first question:

Would you say that the public schools in this community have improved from, say, five years ago, gotten worse, or stayed about the same?

	National Totals %	No Children In School %	Public School Parents %	Nonpublic School Parents %	1987 National Totals %
Improved	29	25	39	36	25
Gotten worse	19	19	16	25	22
Stayed about the same	37	38	36	26	36
Don't know	15	18	9	13	17

The second question:

As you look back on your own elementary and high school education, is it your impression that children today get a better — or worse — education than you did?

	National Totals %	No Children In School %	Public School Parents %	Nonpublic School Parents %
Better	48	44	58	54
Worse	35	37	31	38
No difference	11	12	9	6
Don't know	6	7	2	2

	National Totals		
	1988 %	1979 %	1973 %
Better	48	41	61
Worse	35	42	20
No difference	11	9	11
Don't know	6	8	8

Sources of the Public's Information About Schools

It is useful for policy makers to know what sources of information people depend on when they judge the quality of the schools in their community. Although educators have never given newspapers high grades for coverage of education news (it is alleged that newspapers tend to accentuate the negative), people now say that newspapers are their chief source of information about the schools. This was not true when a similar question on information sources was first asked in the Gallup survey in 1973.

It should be noted that, since 1973, the percentage of adults in the U.S. with school-age children has dwindled from 39% to about 27%. This probably explains the lower percentage of the public that now depends on students as a source of information.

The question:

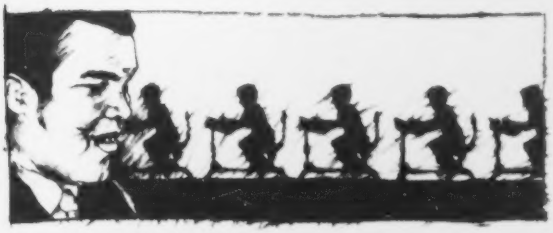
What are the sources of information you use to judge the quality of schools in your community; that is, where do you get your information about the schools?

	National Totals %	No Children In School %	Public School Parents %	Nonpublic School Parents %
Newspapers	52	55	45	54
Students	36	29	57	41
Parents of students	33	29	41	42
Radio and/or television	32	36	22	24
Other adults in community	28	28	26	27
School board/faculty members	25	18	43	39
Other	13	12	16	12
Don't know	3	4	2	3

(Figures add to more than 100% because of multiple answers.)

	National Totals		
	1988 %	1983 %	1973 %
Newspapers	52	42	38
Students	36	36	43
Parents of students	33	29	33
Radio and/or television	32	19	20
Other adults in community	28	27	23
School board/faculty members	25	24	33
Other	13	4	12
Don't know	3	7	4

(Figures add to more than 100% because of multiple answers.)



The Teaching Profession

In the 1988 survey, three trend questions and three entirely new ones were asked in order to assess opinion about policies that affect the supply and quality of teachers.

First, parents were asked if they would like their child to take up teaching as a career. This question has now been asked six times, so that opinion trends can be traced over a 20-year period. The answers are no doubt influenced by a combination of factors, notably teacher supply, the status accorded teaching in the U.S., and the income one can expect from teaching. In 1969 and 1972, when teacher shortages were common, 75% and 67% of parents answered this question affirmatively, and enrollments in teacher education institutions were high.

By the end of the Seventies, public school enrollments were down, and the nation found itself oversupplied with teachers. The 1980, 1981, and 1983 polls showed less than half of the parents favoring teaching careers for their children. Now that shortages are reappearing and teacher salaries are improving, the 1988 poll shows an apparent resurgence of parents' interest in teaching as a career for their offspring.

The question:

Would you like to have a child of yours take up teaching in the public schools as a career?

	National Totals %	No Children In School %	Public School Parents %	Nonpublic School Parents %
Yes	58	56	62	53
No	31	31	30	37
Don't know	11	13	8	10

	National Totals					
	1988 %	1983 %	1981 %	1980 %	1972 %	1969 %
Yes	58	45	46	48	67	75
No	31	33	43	40	22	15
Don't know	11	22	11	12	11	10

Questions of Teacher Quality

The public in general sees a need to attract more capable students into the teaching profession. The same concern for quality is apparent in responses to questions dealing with ways to insure teacher competence. The data in the following tables speak eloquently on this subject.

Of particular interest to educators is the response to a question asking whether the public favors increased pay for teachers who "have proved themselves particularly capable." The vast majority (84%) said yes. A question in the 1984 survey attempted to measure opinion on the same issue but used the loaded term *merit pay*. There was somewhat less unanimity in the public's response to that question. Of those who had heard or read about merit pay for teachers, 76% favored it and 19% opposed it in the 1984 survey. In the total 1984 sample, 65% favored and 22% opposed the idea of merit pay for teachers.

The first question:

Do you think the public schools need to attract more capable students into the teaching profession, or not?

	National Totals %	No Children In School %	Public School Parents %	Nonpublic School Parents %
Yes	89	89	90	88
No	7	7	8	9
Don't know	4	4	2	3

The second question:

In your opinion, should experienced teachers be periodically required to pass a statewide basic

competency test in their subject area or areas, or not?

	National Totals %	No Children In School %	Public School Parents %	Nonpublic School Parents %	1986 National Totals %
Yes	86	84	89	86	85
No	11	11	10	12	11
Don't know	3	5	1	2	4

The third question:

Would you favor or oppose the idea of establishing a national set of standards for the certification of public school teachers?

	National Totals %	No Children In School %	Public School Parents %	Nonpublic School Parents %
Favor	86	85	89	85
Oppose	9	9	8	13
Don't know	5	6	3	2

The fourth question:

Do you favor or oppose an increased pay scale for those teachers who have proved themselves particularly capable?

	National Totals %	No Children In School %	Public School Parents %	Nonpublic School Parents %
Favor	84	84	86	88
Oppose	11	11	11	8
Don't know	5	5	3	4

The fifth question:

Teachers now receive certificates to teach upon completion of their college coursework. Some people believe that teachers should be required to spend one year as interns in the schools at half pay before they are given certificates to teach. Do you think this is a good idea or a poor idea?

	National Totals %	No Children In School %	Public School Parents %	Nonpublic School Parents %	1980 National Totals %
Good idea	51	51	51	50	56
Poor idea	41	40	42	46	36
Don't know	8	9	7	4	8

Censoring Student Publications

The U.S. Supreme Court, in the *Hazelwood School District* v. *Kuhlmeier* decision early this year, ruled that "educators do not offend the First Amendment by exercising editorial control over the style and content of student speech in school-sponsored expressive activities so long as their actions are reasonably related to legitimate pedagogical concerns." While the decision did not overturn the famous *Tinker* decision of 1969, whose main point was that students do not leave their constitutional rights outside the schoolhouse door, it does seem to give educators more authority. The public generally approves of the *Kuhlmeier* decision.

The question:

The U.S. Supreme Court recently ruled in favor of more authority for high school principals to censor school-sponsored student publications. Do you believe that this was a good ruling or a bad ruling?

	National Totals %	No Children In School %	Public School Parents %	Nonpublic School Parents %
Good ruling	59	59	59	64
Bad ruling	28	28	31	24
Don't know	13	13	10	12

A Reassuring Conclusion

On four occasions, Gallup interviewers have asked respondents to assess factors that will determine America's future strength. In each case they have overwhelmingly pointed to a good educational system as the main source of the nation's future strength. The following figures speak for themselves.

The question:

In determining America's strength in the future, say, 25 years from now, how important do you feel each of the following factors will be — very important, fairly important, not too important, or not at all important?

	Very Important %	Fairly Important %	Not Too Important %	Not At All Important %	Don't Know %
Developing the best educational system in the world	88	9	1	1	1
Developing the most efficient industrial production system in the world	65	28	3	1	3
Building the strongest military force in the world	47	35	12	4	2

	Those responding "very important"		
	1988 %	1984 %	1982 %
Developing the best educational system in the world	88	82	84
Developing the most efficient industrial production system in the world	65	70	66
Building the strongest military force in the world	47	45	47

Research Procedure

The Sample. The sample used in this survey embraced a total of 2,118 adults (18 years of age and older). It is described as a modified probability sample of the nation. Personal, in-home interviewing was conducted in all areas of the nation and in all types of communities. A description of the sample can be found below.

Time of Interviewing. The fieldwork for this study was carried out during the period of 8-10 April 1988.

The Report. In the tables, the heading "Nonpublic School Parents" includes parents of students who attend parochial schools and parents of students who attend private or independent schools.

Due allowance must be made for statistical variation, especially in the case of findings for groups consisting of relatively few respondents, e.g., nonpublic school parents.

The findings of this report apply only to the U.S. as a whole and not to individual communities. Local surveys, using the same questions, can be conducted to determine how local areas compare with the national norm.

Composition of the Sample

Adults	%
No children in school	70
Public school parents	27*
Nonpublic school parents	8*

*Total exceeds 30% because some parents have children attending more than one kind of school.

Sex	%
Men	48
Women	52

Race	%
White	86
Nonwhite	14

Age	%
18-29 years	24
30-49 years	39
50 and over	37

Occupation (Chief Wage Earner)	%
Business and professional	26
Clerical and sales	8
Manual labor	38
Nonlabor force	19
Farm	1
Undesignated	6

Income	%
$40,000 and over	21
$30,000-$39,999	16
$20,000-$29,999	17
$10,000-$19,999	27
Under $10,000	14
Undesignated	5

Region	%
East	24
Midwest	25
South	31
West	20

Community Size	%
1 million and over	35
500,000-999,999	8
50,000-499,999	18
2,500-49,999	11
Under 2,500	28

Education	%
College	45
High school	48
Grade school	7

Design of the Sample

The sampling procedure is designed to produce an approximation of the adult civilian population, age 18 and older, living in the U.S., except for persons in institutions such as prisons or hospitals.

A replicated probability sample is used, down to the block level in urban areas and down to segments of townships in rural areas. More than 300 sampling locations are used in each survey.

The sample design included stratification by these seven size-of-community strata, using 1980 census data: 1) incorporated cities of population 1,000,000 and over, 2) incorporated cities of population 250,000 to 999,999, 3) incorporated cities of population 50,000 to 249,999, 4) urbanized places not included in 1 and 2, 5) cities over 2,500 population outside of urbanized areas, 6) towns and villages with populations less than 2,500, and 7) rural places not included within town boundaries. Each of these strata was further stratified into four geographic regions: East, Midwest, South, and West. Within each city-size/regional stratum, the population was arrayed in geographic order and zoned into equal-sized groups of sampling units. Pairs of localities were selected in each zone, with probability of selection of each locality proportional to its population size in the 1980 census, producing two replicated samples of localities.

Separately for each survey, within each subdivision for which block statistics are available, a sample of blocks or block clusters is drawn with probability of selection proportional to the number of dwelling units. In all other subdivisions or areas, blocks or segments are drawn at random or with equal probability.

In each cluster of blocks and each segment, a randomly selected starting point is designated on the interviewer's map of the area. Starting at this point, interviewers are required to follow a given direction in the selection of households until their assignment is completed.

Interviewing is conducted at times when adults, in general, are most likely to be at home, which means on weekends, or, if on weekdays, after 4 p.m. for women and after 6 p.m. for men.

Allowance for persons not at home is made by a "times-at-home" weighting* procedure rather than by "callbacks." This procedure is a standard method for reducing the sample bias that would otherwise result from underrepresentation in the sample of persons who are difficult to find at home.

The prestratification by regions is routinely supplemented by fitting each obtained sample to the latest available Census Bureau estimates of the regional distribution of the population. Also, minor adjustments of the sample are made by educational attainment by men and women separately, based on the annual estimates of the Census Bureau (derived from its Current Population Survey) and by age.

Sampling Tolerances

In interpreting survey results, it should be borne in mind that all sample surveys are subject to sampling error, i.e., the extent to which the results may differ from what would be obtained if the whole population surveyed had been interviewed. The size of such sampling errors depends largely on the number of interviews.

The following tables may be used in estimating the sampling error of any

*A. Politz and W. Simmons, "An Attempt to Get the 'Not at Homes' into the Sample Without Callbacks," *Journal of the American Statistical Association*, March 1949, pp. 9-31.

percentage in this report. The computed allowances have taken into account the effect of the sample design upon sampling error. They may be interpreted as indicating the range (plus or minus the figure shown) within which the results of repeated samplings in the same time period could be expected to vary 95% of the time, assuming the same sampling procedure, the same interviewers, and the same questionnaire.

The first table shows how much allowance should be made for the sampling error of a percentage:

Recommended Allowance for Sampling Error of a Percentage

	In Percentage Points (at 95 in 100 confidence level)* Sample Size						
	1,500	1,000	750	600	400	200	100
Percentages near 10	2	2	3	3	4	5	8
Percentages near 20	3	3	4	4	5	7	10
Percentages near 30	3	4	4	5	6	8	12
Percentages near 40	3	4	5	5	6	9	12
Percentages near 50	3	4	5	5	6	9	13
Percentages near 60	3	4	5	5	6	9	12
Percentages near 70	3	4	4	5	6	8	12
Percentages near 80	3	3	4	4	5	7	10
Percentages near 90	2	2	3	3	4	5	8

*The chances are 95 in 100 that the sampling error is not larger than the figures shown.

The table would be used in the following manner: Let us say that a reported percentage is 33 for a group that includes 1,000 respondents. We go to the row for "percentages near 30" in the table and across to the column headed "1,000."

The number at this point is 4, which means that the 33% obtained in the sample is subject to a sampling error of plus or minus four points. In other words, it is very probable (95 chances out of 100) that the true figure would be somewhere between 29% and 37%, with the most likely figure the 33% obtained.

In comparing survey results in two samples, such as, for example, men and women, the question arises as to how large a difference between them must be before one can be reasonably sure that it reflects a real difference. In the tables below, the number of points that must be allowed for in such comparisons is indicated.

Two tables are provided. One is for percentages near 20 or 80; the other, for percentages near 50. For percentages in between, the error to be allowed for lies between those shown in the two tables.

Recommended Allowance for Sampling Error of the Difference

TABLE A	In Percentage Points (at 95 in 100 confidence level)* Percentages near 20 or percentages near 80					
Size of Sample	1,500	1,000	750	600	400	200
1,500	4					
1,000	4	5				
750	5	5	5			
600	5	5	6	6		
400	6	6	6	7	7	
200	8	8	8	8	9	10

TABLE B	Percentages near 50					
Size of Sample	1,500	1,000	750	600	400	200
1,500	5					
1,000	5	6				
750	6	6	7			
600	6	7	7	7		
400	7	8	8	8	9	
200	10	10	10	10	11	13

*The chances are 95 in 100 that the sampling error is not larger than the figures shown.

Here is an example of how the tables would be used: Let us say that 50% of men respond a certain way and 40% of women respond that way also, for a difference of 10 percentage points between them. Can we say with any assurance that the 10-point difference reflects a real difference between men and women on the question? Let us consider a sample that contains approximately 750 men and 750 women.

Since the percentages are near 50, we consult Table B, and, since the two samples are about 750 persons each, we look for the number in the column headed "750," which is also in the row designated "750." We find the number 7 here. This means that the allowance for error should be seven points, and that, in concluding that the percentage among men is somewhere between three and 17 points higher than the percentage among women, we should be wrong only about 5% of the time. In other words, we can conclude with considerable confidence that a difference exists in the direction observed and that it amounts to at least three percentage points.

If, in another case, men's responses amount to 22%, say, and women's to 24%, we consult Table A, because these percentages are near 20. We look in the column headed "750" and see that the number is 5. Obviously, then, the two-point difference is inconclusive.

Acknowledgments

In order to insure that concerns of the Phi Delta Kappa membership would be reflected in this 20th annual Gallup/PDK education poll, delegates and officers present at the fraternity's biennial council, held in October 1987 in Louisville, Kentucky, were asked to suggest questions. Some 217 persons responded, offering as many as five questions each. After a lengthy process of evaluation and elimination, which involved members of the Board of Governors of the PDK Educational Foundation and members of the PDK professional staff, the questions in this poll were selected from a composite list of 213. The names and chapter affiliations of persons who suggested these questions, in some form, follow:

Eleanor Z. Baker (Victoria Texas Area Chapter); Bob Biggs (Rich Mountain Arkansas Chapter); Evelyn S. Broaddus (Mendocino Lake California Chapter); George Brower (Eastern Michigan University Chapter); Franklin D. Carlson (Central Washington Chapter); Ethel Davis (California University of Pennsylvania Chapter); Charles Eiszler (Central Michigan University Chapter); Joyce Hardin (Texas Tech University Chapter); Mary A. Jensen (State University College/Geneseo Chapter); Dennis E. Kelly (Southern New Jersey/Stockton State College Chapter); Patricia Krueger (Olympia Area Washington Chapter); Margene Larson (California State University/Long Beach Chapter); Vince Mahoney (Great River Iowa Chapter); Arthur L. Margro (Fordham University Chapter); Edward G. McEvoy (Decatur Alabama Chapter); Darlene N. McNulty (University of Iowa Chapter); Jimmy Merchant (Sam Houston State University Chapter); Bruce Mitchell (Eastern Washington University Chapter); Argino L. Morgan (University of New Orleans Chapter); Earl Newman (Mid-State Oklahoma Chapter); Leedell W. Neyland (Florida A&M University Chapter); Randy Pachuta (Broward County Florida Chapter); Judy Patton (Southeastern Indiana Chapter); Ed Peltz (Mount Baldy California Chapter); Mary Lou Purvis (Southeast Alaska Chapter); Shirley N. Robards (Tulsa Oklahoma Chapter); Lloyd V. Rogers (Monterey Bay Area California Chapter); Hugh Ross (University of Alberta Chapter); Elaine Rossmiller (Stevens Point Wisconsin Chapter); Gary Schroeder (Murray State University Chapter); Dorothy A. Shipman (Ball State University Chapter); Ed Solomon (Napa Valley California Chapter); Roseann Stephens (Harvard University Chapter); Lloyd R. Thompson (California State College/Stanislaus Chapter); Laverne Warner (Sam Houston State University Chapter); and E.M. Williams (Los Angeles California Chapter).

I also wish to acknowledge the help of Richard B. Morland of Stetson University, DeLand, Florida, in planning for this poll. — Stanley M. Elam, coordinator, Gallup/Phi Delta Kappa Education Poll.

How to Order the Poll

The minimum order for reprints of the published version of the Gallup Poll is 25 copies for $10. Additional copies are 25 cents each. This price includes postage for parcel post delivery. Where possible, enclose a check or money order.

If faster delivery is desired, do not include a remittance with your order. You will be billed at the above rates plus any additional cost involved in the method of delivery.

Persons who wish to order a set of the tables showing detailed demographic breakdowns on questions included in the 1988 Gallup/PDK education survey may do so by writing to Phi Delta Kappa, enclosing $10 to cover all costs. (These tables are not included in the published version of the poll.)

Phi Delta Kappa has published a 15-year (1969-1984) compilation of the Gallup polls on education. In this volume the poll questions are arranged topically rather than chronologically, making it easier to look up poll results on specific topics. *The Gallup Polls of Attitudes Toward Education, 1969-1984: A Topical Summary* can be ordered for $6 each ($5 for PDK members).

Orders for reprints, for the demographic breakdowns, or for the book should be addressed to Gallup Poll, Phi Delta Kappa, P.O. Box 789, Bloomington, IN 47402-0789. Ph. 812/339-1156.

Aims, Equity, and Access in Computer Education

Educators are making tough choices about whether and how to link computers and learning. Now, data from the National Assessment of Educational Progress inform the debate.

BY ARCHIE E. LAPOINTE AND MICHAEL E. MARTINEZ

WHAT IS THE best possible role for computers in precollegiate education? There is no consensus about how computers should be used in the schools; indeed, there is some disagreement over whether they should be used in schools at all.

Despite the controversy, teachers, principals, superintendents, and school boards are making tough choices about whether and how to link computers and learning. Many questions are relevant to the discussion: Are computers being integrated into subject-matter areas? Should they be? How important is out-of-school access to computers in developing computer-related competence? How can we insure that access to computers will be equitably distributed between males and females and across racial and ethnic lines?

At the same time, the widespread belief that America faces an uncertain economic future is fueling the interest in technology-related education. The current scene bears a striking resemblance to the national climate following the launch of Sputnik I in 1957. John Jennings captured the national mood well when he called economic competitiveness "the Sputnik of the Eighties."[1] Just as the first Russian satellite triggered sweeping reforms in education in the 1950s and 1960s, so the specter of a declining America is now focusing attention on education as one means of solving the nation's problems. Many educators, businesspeople, and politicians have come to believe that the U.S. needs a wholesale increase in scientific and technological literacy that includes at least a working knowledge of computer functions.[2]

In 1986 the National Assessment of Educational Progress (NAEP) conducted the first nationwide assessment of students' computer-related knowledge, skills, attitudes, and experience. More than 24,000 third-, seventh-, and 11th-graders participated.

In preparation, the NAEP assembled an advisory committee of computer education experts, classroom teachers, and curriculum specialists to decide which knowledge and what skills should be assessed. The committee's recommendations were reviewed by more than 100 teachers, computer education experts, and laypeople from across the U.S., whose advice shaped the final set of assessment objectives and questions.[3] Ultimately, the committee recommended three areas for assessment: 1) knowledge of computer technology, including components, operations, and principles underlying computer use; 2) understanding of computer applications, such as word processing, graphics, spreadsheets, and databases; and 3) understanding of computer programming, in BASIC and Logo for third- and seventh-graders and in BASIC and Pascal for 11th-graders. The assessment used a pencil-and-paper format, and most questions were multiple choice, though some open-ended questions were asked.

The belief that America faces an uncertain economic future is fueling interest in technology-related education.

We will not discuss here the findings as they relate to these three areas, nor will we provide much information about the actual levels of competence. The reason is that this assessment was the first of its kind and thus provided only baseline data. Without past data for comparison, statements about competence levels must be tentative. The relevant discussion, with sample questions, can be found in the NAEP report, *Computer Competence: The First National Assessment*.[4]

We will concentrate instead on the students' attitudes toward and experience with computers and on the factors associated with composite performance

ARCHIE E. LAPOINTE is director of the National Assessment of Educational Progress, administered by the Educational Testing Service, Princeton, N.J. MICHAEL E. MARTINEZ (Stanford University Chapter) is an associate research scientist at ETS.

across all the questions in the NAEP assessment. We will address four fundamental concerns: student attitudes toward computer use, the lack of integration of computers into the subject areas, the importance of access to computers at home and in school, and the differences in the performance of subgroups.

Attitudes toward computer use. What do American students think about computers? Most say that they like computers and wish that they could use them more often in school.

An overwhelming majority of the students in grades 3 and 7 reported that they like using computers: 91.2% of third-graders and 86.4% of seventh-graders responded in that fashion. Students in grades 7 and 11 were asked how often they would like to use computers in class. (About one-third of all students had *never used computers* in class.) Of those who had used computers, most said that they would like to use them in their classes more often. Only 3% to 5% said that they wished they could use a computer in class less often. If policy decisions were based on students' current attitudes, computer-related education would saturate the schools.

Computer use in schools. Computers appear to be making little headway in the subject-matter areas. As Table 1 shows, large percentages of students said that they have never used a computer in the traditional subjects. For example, about 70% of 11th-graders had not used a computer in math class, and about 85% had never used one in English or science classes. Even those students who *had* used computers to study traditional subjects had used them infrequently. Only 10% or fewer students said that they had used a computer more than once a week to practice such skills as mathematics, reading, and spelling or to write reports or do science problems. Most students reported never having used a computer for these purposes.

By contrast, a large proportion of students had used computers to play games, and many did so frequently. About half of the seventh-graders, for example, played computer games at least once a week. Our data reflect computer use inside and outside of school; hence much of the reported game activity may have occurred at home. Nonetheless, our conclusion stands: computers are used infrequently to develop subject-matter knowledge and skills, but they are used frequently to play games.

If policy decisions were based on students' current attitudes, computer-related education would saturate the schools.

Access to computers. Students who have access to computers in school and at home stand a better chance of developing computer skills than do their not-so-advantaged peers. Students who were neither studying computers nor had access to them at home had the lowest levels of computer competence; those who were studying computers *and* had access to them at home had the highest levels of competence.

Computer competence is clearly related to computer instruction and to access to computers at home. It is not clear that access to computers at home causes higher levels of computer competence; both home access to computers and competence in using them are probably related to a family's socioeconomic status. However, the full report of the assessment shows that, even among students whose parents did not finish high school, home access to computers is correlated with higher levels of computer competence. How can teachers and administrators deal with possible inequities in access for those children whose families cannot afford to provide computers for home use? This is a hard question to which there are no simple answers, but it is a question that educators and policy makers must address.

Subgroup differences. Across all three grade levels, boys were more computer competent than girls. But these differences were small – none greater than three percentage points. The differences between boys and girls in competence were statistically significant across all three grades, but whether they are practically significant is a matter for interpretation.

Boys and girls differed little in the percentages who said that they had ever used a computer: boys led girls by 78.1% to 71.5% in grade 3, by 90% to 87.9% in grade 7, and by 87.5% to 86.1% in grade 11. Nor did the percentages of boys and girls who were studying computers in school differ widely: boys led girls by 49% to 46.9% in grade 3, by 40.6% to 39% in grade 7, and by 21.1% to 19.9% in grade 11. The sexes differed appreciably, however, in whether their families owned a computer: boys led by 31.4% to 25.8% in grade 3, by 37.3% to 28% in grade 7, and by 35.2% to 25.1% in grade 11. Why do boys have greater home access to computers, even in grade 3? Why does the difference rise to approximately 10% in grades 7 and 11? And what can teachers and administrators do to compensate for less access among girls? This is another hard question. The NAEP data cannot answer it, of course, but they can inform the debate that must occur if it is ever to be satisfactorily answered.

Of the racial and ethnic subgroups, Asian-Americans had the highest average computer competence across all grade levels. White students scored below their Asian-American counterparts;

TABLE 1.
Percentage of Students Who Have Ever Used Computers in Traditional Subjects

	Grade 3 %	Grade 7 %	Grade 11 %
Mathematics	53.0	39.4	29.1
Reading/English	25.0	23.9	16.9
Science	12.8	11.6	15.4
Social Studies	11.7	10.2	4.6
Art	21.6	7.3	3.2
Music	16.9	7.0	3.9

black, Hispanic, and Native American students scored below their white peers. However, because of the small samples, the performance data for Asian-Americans and Native Americans must be regarded as tentative. We have excluded them from our subsequent discussion.

Black, white, and Hispanic students, for whom the data are most reliable, differed in their access to computers. In a 1983 survey, Henry Becker found that schools serving primarily minority populations were slightly less likely than other schools to own microcomputers (31% and 34% respectively).[5]

Similarly, the NAEP findings showed that black students and Hispanic students in grades 3 and 7 were less likely to be studying computers in school than were white students. There was little difference among the 11th-grade subgroups on this factor, although we cannot be certain that the various subgroups received the same quality of instruction. The largest differences among racial and ethnic groups were in family ownership of a computer: at all grade levels, the families of white students were more likely to own a computer than were families of black or Hispanic students. Within each subgroup, students who had access to a computer at home were more computer competent than those who did not.

WE BEGAN this article by alluding to the controversy over the role, if any, that computers ought to play in education. The NAEP findings inform several facets of that debate. For example, the NAEP data show that computers are not widely used to learn traditional subjects, such as mathematics, science, and English. The data also indicate that students' school and home experiences are strongly related to their computer competence. The NAEP findings suggest a further concern: males and females and the members of various racial and ethnic groups do not seem to have equitable access to computers.

Even as we wonder about the best use of computers in schools, standard hardware configurations and their prices continue to change, curriculum emphases shift, and entirely new uses arise for computers in education. Even now, educational uses of computers go far beyond the categories of applications and of programming skills that we used in this assessment. Computers are used as teaching aids that range in sophistication from drill-and-practice devices to intelligent tutoring systems that can diagnose student errors and provide relevant remedial instruction.[6] Students are using computers to create mathematically based models of phenomena that range from the human metabolism to wars and revolutions,[7] and they are using interactive simulations to infer principles of mathematics and science.[8]

Time will no doubt reveal further uses of the computer that cannot yet be imagined. The good news is that the schools are testing some great ideas that might serve as models for computer education in the future. The bad news (if the lessons from past educational innovations apply) is that taxpayers and policy makers tend to grow impatient with ambiguity and become overeager for specific answers to the question, "What's best?"

We do not see a single best use of computers in schools. Instead, we see a multiplicity of beneficial uses, such as those described above. It seems premature to pass judgment on the success of computers in education. Continued investments of time and money are necessary if the potential of computers in education is to be understood. We hope for a spirit of patient enthusiasm among educators, as computers and their educational uses change.

The debate will continue to be heated and lively. In the meantime, teachers, principals, superintendents, and school boards will continue to face tough choices. Considerations of access and equity must be among their concerns and should be taken into account in policy decisions. Perhaps, through these decisions, the "Sputnik of the Eighties" – international competitiveness – will lead to vigorous and effective reform in education.

1. John F. Jennings, "The Sputnik of the Eighties," *Phi Delta Kappan*, October 1987, pp. 104-9.
2. Alan Greenspan, remarks made at the Martin Luther King, Jr., Social Responsibility Seminar, Atlanta, 15 January 1988.
3. A description of the process can be found in *A Framework for Assessing Computer Competence: Defining Objectives* (Princeton, N.J.: National Assessment of Educational Progress, Educational Testing Service, 1986).
4. *Computer Competence: The First National Assessment* (Princeton, N.J.: National Assessment of Educational Progress, 1988) is available for $14, including shipping and handling, from NAEP, P.O. Box 6710, Princeton, NJ 08541-6710. A 50% discount will be applied to orders of three or more copies.
5. Henry J. Becker, *School Uses of Microcomputers*, Johns Hopkins University, Center for the Social Organization of Schools, October 1983, pp. 1-2.
6. Derek Sleeman and John S. Brown, *Intelligent Tutoring Systems* (New York: Academic Press, 1982).
7. Ellen B. Mandinach, "Student Model-Building and Use of a Computer Simulation of Dynamic Systems," paper presented at the annual meeting of the American Educational Research Association, New Orleans, April 1988.
8. Tim O'Shea and John Self, *Learning and Teaching with Computers* (Englewood Cliffs, N.J.: Prentice-Hall, 1983). K

"Jimmy, for talking in class I want you to stay after school and clean all the computer screens."